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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/675,468	09/28/2000	John Bryan Ibbotson	GB919990081US1/1751P	8913

7590 07/29/2005

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EXAMINER	
PILLAI, NAMITHA	
ART UNIT	**PAPER NUMBER**
2173	

DATE MAILED: 07/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/675,468	IBBOTSON ET AL.	
	Examiner	Art Unit	
	Namitha Pillai	2173	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9 and 11-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9 and 11-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 September 2000* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Appeal Brief

1. In view of the arguments presented on the appeal brief filed on 5/5/05, PROSECUTION IS HEREBY REOPENED. The Examiner acknowledges Applicant's arguments concerning the plurality of tree structures with hierarchical nodes, wherein further inspection of U. S. Patent No. 6, 243, 858 B1 (Mizoguchi et al.), herein referred to as Mizoguchi, reveals that this art does not clearly disclose these features. The claims have been newly rejected under 35 U. S. C. 103 as being obvious over prior art disclosed. The pending claims are 1-9 and 11-20.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, a display containing the plurality of tree structures comprising a hierarchical series of nodes, along with the respective input and output lists must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the

renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 4-6, 9 and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizoguchi and U. S. Patent No. 6, 823, 495 B1 (Vedula et al.), herein referred to as Vedula.

Referring to claims 1 and 18-20, Mizoguchi discloses a tool for graphically defining an expression with a graphic user interface (GUI) component with means for responding to user input for generating a graphic definition of the expression by defining a plurality of data structures (Figures 6 and 13), wherein Figure 6 discloses the creation of an initial data structure and wherein Figure 13 further depicts two distinct data structures wherein two are defined based on the use of a conditional statement. Mizoguchi discloses lists with a plurality of items that are associated with a respective node as seen on Figure 11. Figure 11 of Mizoguchi also clearly discloses an input data structure and at least one other tree structure representing an output data structure wherein any associated list item defines a formatting definition, used for the graphic expression. Mizoguchi discloses an expression generator component adapted to read the graphic

definition of the expression provided by a user through the GUI component, with the expression generator analyzing the graphic definition and generating an expression based on the structure of the data structure and any list items associated with respective nodes of the data structure (Figure 23), wherein the grid representation which is the graphic definition is executed and the result of the execution is outputted, this involving analyzing and generating of an expression from the graphic representation. Mizoguchi does not clearly disclose the defining process of multiple tree structures, wherein the structure in Mizoguchi has not been clearly disclosed as containing hierarchical nodes. Vedula discloses the defining process of multiple tree structures, wherein further disclosing that these structures include hierarchical nodes as is seen in Figure 1. It would have been obvious for one skilled in the art, at the time of the invention to learn from Vedula to use the means of multiple tree structures with the structures containing hierarchical nodes. Both Mizoguchi and Vedula disclose the definition of tree structures using graphical means, wherein Vedula further teaches the defining of multiple tree structures, wherein allowing for multiple tree structures to be defined by a user. Hence, one skilled in the art, at the time of the invention would have been motivated to learn from Vedula to disclose defining process of multiple tree structures, wherein further disclosing that these structures include hierarchical nodes.

Referring to claim 4, Mizoguchi discloses the nodes comprise leaf and branch nodes, the branch nodes representing complex structured fields (Figure 14B) and the leaf nodes representing simple fields comprising strings (Figure 9B).

Referring to claim 5, Mizoguchi discloses each list item comprises an expression ("DATA RECORD PROCESSING" section, Figure 11).

Referring to claim 6, Mizoguchi discloses that the GUI component is adapted to allow a user to define a tree structure representing an input data structure wherein any associated list item defines a filtering constraint, wherein the constraint is processed by the data record processing section (Figure 11).

Referring to claim 9, Mizoguchi discloses allowing a user to graphically link two or more nodes, wherein "Record Item 1" and "Record Items 4-6" within the input tree structures generates a logical expression, wherein as seen from the input tree to the Data Record Processing section which holds the expressions, the nodes are limited to equality, wherein the values of these nodes are equal to each other and do not change (Figure 11).

Referring to claim 11, Mizoguchi discloses allowing a user to define an input tree structure, wherein based on the user's inputting, the input tree structure and the output tree structure are defined, each having the associated lists, with the list items for the output tree structure identifying a node of the input tree structure (Figure 11).

Referring to claim 12, Mizoguchi discloses displaying a list for an output tree to the left of the tree (Figure 11).

Referring to claim 13, Mizoguchi discloses is adapted to allow a user to define a list item with a free variable representing the associated tree structure node within the graphical definition, wherein the variable is "Record Items 1-8" in Figure 11.

Referring to claim 14, Mizoguchi discloses a node represented by a wildcard symbol, the wildcard symbol representing the node and all otherwise undefined substructures of the node, the node being "Record Item 9", which is not defined in the Processing Section, as seen in Figure 11.

Referring to claim 15, Mizoguchi discloses defining a structure comprising a branch node having a sub-structure comprising one or more defined nodes (Figure 14B) and a node represented by a wildcard symbol (Figure 11).

4. Claims 2, 3 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizoguchi, Vedula and U. S. Patent No. 6, 434, 545 B1 (MacLeod et al), herein referred to as MacLeod.

Referring to claim 2, Mizoguchi and Vedula do not explicitly disclose the expressions being configured for a database query. MacLeod discloses a system wherein database queries are created from graphically generating a query (Figures 4 and 5). It would have been obvious for one skilled in the art, at the time of the invention to learn from MacLeod to configure one of a plurality of nodes for database querying. Mizoguchi and Vedula uses multiple tree structures in defining a graphic expression, wherein these graphic expressions would express various kinds of processes, wherein database queries would fall under these processes. MacLeod has clearly shown how such a database query expression is generated from a graphic definition. Hence, one skilled in the art, at the time of the invention would have been motivated to learn from MacLeod to configure one of a plurality of nodes for database querying.

Referring to claim 3, Mizoguchi, Vedula and MacLeod disclose the expression is an SQL3 expression (MacLeod, column 1, lines 22-25).

Referring to claim 16, Mizoguchi and Vedula does not disclose analyzing through a grammatical definition. MacLeod discloses that the analyzing means is cooperable with a grammatical definition of the graphic definition to generate the expression, wherein the graphic expression is used to generate the expression based on a grammatical definition (Figures 5 and

10). It would have been obvious for one skilled in the art, at the time of the invention to learn from MacLeod to have analyzing means that is cooperable with a grammatical definition of the graphic definition to generate the expression. Mizoguchi discloses taking a graphical definition to generate an expression and analyses of this graphic definition to determine the execution process. It is inherent that a grammatical definition, included, as instructions would be used to carry out the actions of the process created by the grammatical definition. Furthermore, one skilled in the art, at the time of the invention would have been motivated to learn from MacLeod to clearly state that in fact grammatical definitions are used during the analysis step to go from the graphic definition to the generated expression.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mizoguchi, Vedula and U. S. Patent No. 5,555,367 (Premerlani et al.), herein referred to as Premerlani.

Referring to claim 7, Mizoguchi and Vedula discloses that more than one tree structure does exist but does not disclose that these input structures would be linked based on the nodes within these structures. Premerlani discloses allowing users to define two tree structures, each having an associated list with at least one list item associated with a first node of a first input tree identifying a second node of a second input tree structure from which an expression joining the two input tree on the nodes are generated (column 1, lines 25-35). Premerlani discloses that the idea of joining two structures is common through querying and is implemented in query languages, as would be the case when an expression joining the two structures is generated. It would have been obvious for one skilled in the art, at the time of the invention to learn from Premerlani for means to join two of the data structures that are referred to in Mizoguchi and Vedula. Mizoguchi and Vedula clearly discloses the linking of input tree structures, wherein the

input tree structures of the various modules represented in the graphic presentation and used for creating this graphic presentation must clearly be linked to each other in order for the proper input information and output information to enter and leave each individual modules. This implementation gives the system more flexibility, wherein users can link more than one structure and with Premerlani go further by using data within these structures providing greater depths for working with the data, wherein the specific data within these trees are used for more clearly showing the linking of the data structures. Hence, one skilled in the art, at the time of the invention would have been motivated to learn from Premerlani for means for linking the nodes of more than tree structure.

6. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mizoguchi, Vedula and U. S. Patent No. 6,535,883 B1 (Lee et al.).

Referring to claim 8, Mizoguchi and Vedula do not disclose input tree structures with two or more associated lists. Lee discloses as seen in Figure 15, the GUI component adapted to allow a user to define an input tree structure having two or more associated lists, at least one list item from each list comprising an expression from which said expression generator generates a logical OR expression. It would have been obvious for one skilled in the art, at the time of the invention to learn from Lee to use the association of the multiple links in an input tree structure with the items comprising expressions generating a logical OR expression. Mizoguchi and Vedula would benefit from the use of multiple lists, wherein these lists would hold more information, which would be in depth within one tree structure. Hence, it would have been obvious for one skilled in the art, at the time of the invention to learn from Lee to disclose to use

the association of the multiple links in an input tree structure with the items comprising expressions generating a logical OR expression.

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mizoguchi, Vedula and MacLeod and further in view of, U. S. Patent No. 6,476,833 B1 (Moshfeghi), herein referred to as Moshfeghi.

Referring to claim 17, Mizoguchi, Vedula and MacLeod do disclose that the nodes comprise a filter (Mizoguchi, Figure 11) but do not disclose that it filters XML messages. Moshfeghi discloses the filtering of XML documents (column 3, line 43). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Mizoguchi, Vedula and MacLeod's invention such that there were a means for filtering XML messages. XML's filtering process according to Moshfeghi is done to parse the content of messages to locate all the linking information for subsequent processing. Mizoguchi, Vedula and MacLeod would need a means for processing the messages concerning the queries submitted by the user. Hence, one skilled in the art, at the time of the invention would be motivated to learn from Moshfeghi to disclose a means for filtering XML documents.

Response to Arguments

8. Applicant's arguments with respect to claims 1 and 18-20 have been considered but are moot in view of the new ground(s) of rejection.

With respect to Applicant's arguments that the output data structure includes formatting definition information. The data represented by both the output and input data structures pertains to parameter information related to a particular node or function represented by that node. The fact that the data represented in these structures are themselves representative of a node entity

makes any data formatting data. The data in these structures when manipulated by the user in Figure 11, allows for the node represented to be formatted, wherein the interpretation that the contents of the data structure serve as formatting data.

Conclusion

9. The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. Applicant is required under 37 C.F.R. § 1.111(c) to consider these references fully when responding to this action. The documents cited therein teach the method for graphically defining expression data.

Responses to this action should be submitted as per the options cited below: The United States Patent and Trademark Office (Office) requires most patent related correspondence to be: **a)** faxed to the Central FAX number (571-273-8300) (updated as of July 15, 2005), **b)** hand carried or delivered to the Customer Service Window (located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), **c)** mailed to the mailing address set forth in 37 CFR 1.1 (e.g., P.O. Box 1450, Alexandria, VA 22313-1450), or **d)** transmitted to the Office using the Office's Electronic Filing System. On July 15, 2005, the Central Facsimile (FAX) Number will change from 703-872-9306 to 571-273-8300. Faxes sent to the old number will be routed to the new number until September 15, 2005. After September 15, 2005, the old number will no longer be in service and 571-273-8300 will be the only facsimile number recognized for "centralized delivery." The official notice dated June 20, 2005 also includes an "updated list of exceptions to the centralized delivery and facsimile transmission policy for patent related correspondence." Questions regarding this notice may be e-mailed to PatentPractice@uspto.gov, or directed to the Inventors' Assistance Center by telephone at 800-786-9199, or 571-272-1000.

Please label "PROPOSED" or "DRAFT" for informal facsimile communications. For after final responses, please label "AFTER FINAL" or "EXPEDITED PROCEDURE" on the document.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Namitha Pillai whose telephone number is (571) 272-4054. The examiner can normally be reached on 8:30 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca can be reached on (571) 272-4048.

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3800.

Namitha Pillai
Assistant Examiner
Art Unit 2173
July 21, 2005

JOHN CABECA
SUPERVISORY PATENT EXAMIN
TECHNOLOGY